

Date: Thursday, 3/13/2008 10:17:51 AM
User: Kim Johnston

Process Sheet

| | |
|--|-------------------------------|
| Customer : CU-DAR001 Dart Helicopters Services | Drawing Name : TUBE ASSEMBLY |
| Job Number : 37913 | |
| Estimate Number : 11924 | |
| P.O. Number : | Part Number : D2003103 |
| This Issue : 3/13/2008 S.O. No. : | Drawing Number : UNDER REVIEW |
| Prsht Rev. : NC | Project Number : N/A |
| First Issue : / / | Drawing Revision : B |
| Previous Run : 29934 | Material : - |
| Written By : | Due Date : 3/28/2008 |
| Checked & Approved By : <u>JA 08 03 13</u> | Qty: 5 Um: Each |
| Comment : Est. B 03.03.31 Reformat KJ/RF | |

Additional Product

Job Number:



| | | |
|---------|-----------------------|---------------|
| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|

| | | |
|-----|------------------|--------------------------|
| 1.0 | M6061T6T0375W035 | 6061-T6 Tube .375 x.035W |
|-----|------------------|--------------------------|



Comment: Qty.: 1.1025 f(s)/Unit Total : 5.5125 f(s)
Cut tube Ø 0.375" x 0.035" wall as per template D2003-103T1 (12.00" long)
Material: 6061-T6 WW-T-600/6
(M6061T6T0.375W.035)
Batch: M103763

FF 08-03-27

⑤

| | | |
|-----|--------|--------------------------|
| 2.0 | M26506 | Firesleeve-crkl .375IDia |
|-----|--------|--------------------------|



Comment: Qty.: 1.0828 f(s)/Unit Total : 5.4138 f(s)
Cut:
Qty Part Number Description Batch
1 M2650-6 Heat Sleeve M106781

FF 08-03-27

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| | | |
|-----|----------|-----------------------|
| 3.0 | D2182045 | Heat Shrink 4.5" Long |
|-----|----------|-----------------------|



Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)
Heat Shrink
Pick:
Qty Part Number Description Batch
1 D2182-045 Heat shrink B21864A

FF 08-03-27

⑤

| | | |
|-----|-------------|-------------------------------|
| 4.0 | SMALL FAB 1 | SMALL & MEDIUM FAB RESOURCE 1 |
|-----|-------------|-------------------------------|



Comment: SMALL & MEDIUM FAB RESOURCE 1
Cut 12.38" long Heat sleeve as per Dwg D2003 & heat shrink
Form tube as per template D2003-103T2

FF 08-03-27

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Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Date: Thursday, 3/13/2008 10:17:51 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 37913

Part Number: D2003103

Job Number:



Seq. #:

Machine Or Operation:

Description:

5.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/03/27 (X5)

6.0

AN8186D

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total: 10.0000 Each(s)

Nut

Pick:

Qty Part Number Description Batch

2 AN818-6D Nut M 103154

FF 08-03-27

(5)

7.0

MS208196D

Sleeve



Comment: Qty.: 2.0000 Each(s)/Unit Total: 10.0000 Each(s)

Sleeve

Pick:

Qty Part Number Description Batch

2 MS20819-6D Sleeve M107534

FF 08-03-27

(5)

8.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble as per Dwg D2003

Install Red decal and heat shrink as per PPP D2003-103

FF 08-03-27

(5)

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/03/27 (X5)

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: ST6

AS 08/03/28

(X5)

11.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/04/03

Job Completion



W
MF

08-03-28

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

DART

| | | | |
|----------------------|-----------------------|--|------------------------|
| DESIGN <i>JA</i> | DRAWN BY <i>GP</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>JE</i> | APPROVED <i>JA</i> | DRAWING NO. D2003 | REV. B SHEET 1 OF 2 |
| DATE 99.06.08 | | TITLE 206 CABIN HEATER TUBE ASSEMBLIES NTS | |
| A | 90.04.09 | NEW ISSUE | |
| B | 99.06.08 | UPDATE PER TEMPLATES; ADD P/N'S; 0.025 TUBING NOW 0.035 (TSR1049) | |

RELEASED
49.06.08 RE**UNDER REVIEW**

06.03.21 GB

Some Flat
lengths wrong

08-03-27

| P/N | TEMPLATE | HEATSLEEVE LENGTH ¹ | CUT LENGTH OF TUBE ² | MS20819-8J SLEEVE | AN818-8J NUT | MS20819-8D SLEEVE | AN818-8D NUT | MS20819-6D SLEEVE | AN818-6D NUT | DESC. | MATERIAL ^{4/5/7} | VENDOR OR SPEC |
|-----------|-----------|-----------------------------------|------------------------------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|------------|----------------------------|-------------------|
| D2003-001 | T2003-001 | 5.2 | 6.00 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-700/6 |
| D2003-003 | T2003-003 | 7.3 | 8.12 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-700/6 |
| D2003-005 | T2003-005 | 9.8 | 10.62 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-700/6 |
| D2003-007 | T2003-007 | 20.0 | 19.63 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-700/6 |
| D2003-009 | T2003-009 | 12.38 | 12.44 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-700/6 |
| D2003-011 | T2003-011 | 33.31 | 32.38 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-700/6 |
| D2003-013 | T2003-013 | 12.7 | 13.54 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-700/6 |
| D2003-015 | T2003-015 | 17.2 | 18.00 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-700/6 |
| D2003-017 | T2003-017 | 17.0 | 16.25 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-700/6 |
| D2003-019 | T2003-019 | 9.8 | 10.62 | | | 2 | 2 | | | TUBE ASS'Y | 6061-T6 0.500 OD x 0.035 W | WW-T-700/6 |
| D2003-021 | T2003-021 | N/A | 2.25 | | | 2 | 2 | | | TUBE ASS'Y | 6061-T6 0.500 OD x 0.035 W | WW-T-700/6 |
| D2003-023 | T2003-023 | 4.5 | 5.33 | | | 2 | 2 | | | TUBE ASS'Y | 6061-T6 0.500 OD x 0.035 W | WW-T-700/6 |
| D2003-025 | T2003-025 | 9.8 | 10.60 | | | 2 | 2 | | | TUBE ASS'Y | 6061-T6 0.500 OD x 0.035 W | WW-T-700/6 |
| D2003-027 | T2003-027 | 7.25 | 7.38 | | | 2 | 2 | | | TUBE ASS'Y | 6061-T6 0.500 OD x 0.035 W | WW-T-700/6 |
| D2003-029 | T2003-029 | 17.2 | 18.00 | | | 2 | 2 | | | TUBE ASS'Y | 6061-T6 0.500 OD x 0.035 W | WW-T-700/6 |
| D2003-031 | T2003-031 | 14.6 | 15.38 | 2 | 2 | | | | | TUBE ASS'Y | CRES 0.500 OD x 0.035 W | AISI 304 |
| D2003-033 | T2003-033 | 29.75 | 29.62 | 2 | 2 | | | | | TUBE ASS'Y | CRES 0.500 OD x 0.035 W | AISI 304 |
| D2003-035 | T2003-035 | 24.7 | 27.00 | 2 | 2 | | | | | TUBE ASS'Y | CRES 0.500 OD x 0.035 W | AISI 304 |
| D2003-037 | T2003-037 | 24.81 | 23.38 | 2 | 2 | | | | | TUBE ASS'Y | CRES 0.500 OD x 0.035 W | AISI 304 |
| D2003-039 | T2003-039 | 34.0 | 34.00 | 2 | 2 | | | | | TUBE ASS'Y | CRES 0.500 OD x 0.035 W | AISI 304 |
| D2003-041 | T2003-041 | 6.0 | 5.88 | 2 | 2 | | | | | TUBE ASS'Y | CRES 0.500 OD x 0.035 W | AISI 304 |
| D2003-043 | T2003-043 | 11.7 | 10.75 | 2 | 2 | | | | | TUBE ASS'Y | CRES 0.500 OD x 0.035 W | AISI 304 |
| D2003-045 | T2003-045 | 3.50 | 2.44 | 2 | 2 | | | | | TUBE ASS'Y | CRES 0.500 OD x 0.035 W | AISI 304 |
| D2003-047 | T2003-047 | 5.56 | 5.56 | 2 | 2 | | | | | TUBE ASS'Y | CRES 0.500 OD x 0.035 W | AISI 304 |
| D2003-049 | T2003-049 | 33.2 | 34.00 | 2 | 2 | | | | | TUBE ASS'Y | CRES 0.500 OD x 0.035 W | AISI 304 |
| D2003-077 | T2003-077 | N/A | 6.25 | | | | | 1 | 1 | JET | 6061-T6 0.375 OD x 0.035 W | WW-T-700/6 |
| D2003-101 | T2003-101 | 13.25 | 13.13 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-600/6 |
| D2003-103 | T2003-103 | 12.38 | 12.00 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-600/6 |
| D2003-105 | T2003-105 | 10.75 | 10.60 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-600/6 |
| D2003-107 | T2003-107 | 12.75 | 12.25 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-600/6 |
| D2003-109 | T2003-109 | 8.25 | 8.125 | | | 2 | 2 | | | TUBE ASS'Y | 6061-T6 0.500 OD x 0.035 W | WW-T-600/6 |
| D2003-111 | T2003-111 | 4.75 | 4.625 | | | 2 | 2 | | | TUBE ASS'Y | 6061-T6 0.500 OD x 0.035 W | WW-T-600/6 |
| D2003-116 | T2003-116 | 4.0 | | | | | | | | HEATSLEEVE | M2650-20 CRINKLE-SOFT | STRATOFLEX |
| D2003-120 | T2003-120 | 4.0 | | | | | | | | HEATSLEEVE | M2650-16 CRINKLE-SOFT | STRATOFLEX |
| D2003-14 | T2003-14 | 4.0 | | | | | | | | HEATSLEEVE | M2650-14 CRINKLE-SOFT | STRATOFLEX |
| D2003-16 | T2003-16 | 4.0 | | | | | | | | HEATSLEEVE | M2650-16 CRINKLE-SOFT | STRATOFLEX |
| D2003-205 | T2003-205 | 9.75 | 9.60 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-700/6 |
| D2003-207 | T2003-207 | 3.75 | 3.75 | | | | | 2 | 2 | TUBE ASS'Y | 6061-T6 0.375 OD x 0.035 W | WW-T-700/6 |

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WORK ORDER

37913



| | | | |
|-------------------------------|--------------------------------|---|------------------------|
| DESIGN <i>[Signature]</i> | DRAWN BY <i>[Signature]</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>[Signature]</i> | APPROVED <i>[Signature]</i> | DRAWING NO. D2003 | REV. B SHEET 2 OF 2 |
| DATE 99.06.08 | | TITLE 206 CABIN HEATER TUBE ASSEMBLIES NTS | |

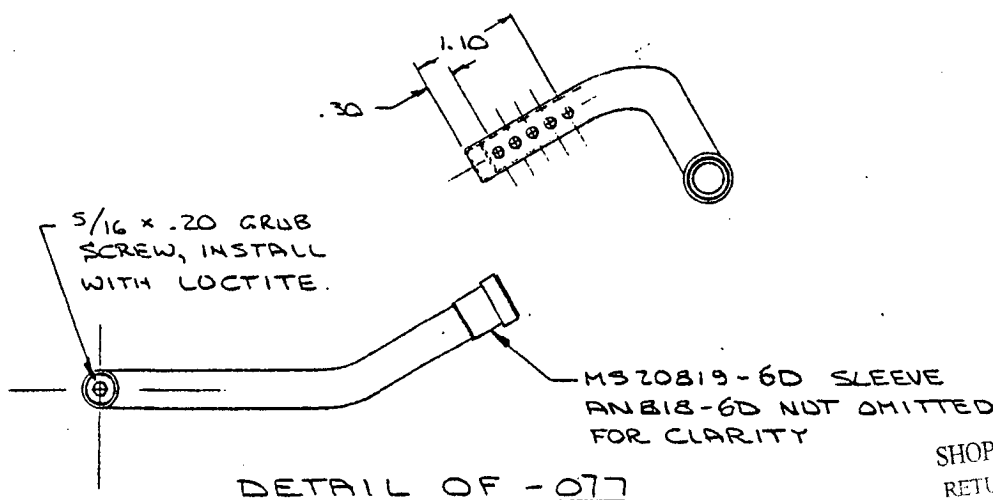
RELEASED
99.06.08 KE

UNDER REVIEW

06.08.21 CB 08.03.27
*Some flat lengths
not wrong*

Notes:

- (1) USE STRATOFLEX M2650-6 CRINKLE-SOFT HEATSLEEVE.
- (2) TUBING ASSEMBLIES TO BE CUT AND BENT IN ACCORDANCE WITH TEMPLATES.
- (3) TUBES TO BE FLARED 30° TO MATE WITH FITTINGS MADE TO MS33514.
- (4) ENSURE SEAMLESS TUBING IS USED.
- (5) INSTALL HEATSLEEVE OVER ALL TUBES WITH A DESIGNATED LENGTH OF HEATSLEEVE PER THE PARTS LIST.
- (6) 5052 (WW-T-700/4) TUBING MAY BE SUBSTITUTED WHEN 6061 TUBING IS NOT AVAILABLE.
- (7) 0.049 WALL THICKNESS CRES TUBING MAY BE SUBSTITUTED WHEN 0.035 IS NOT AVAILABLE.
- (8) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.



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